

### Abstract of the Disclosure

Preparation of a weld between a structural I-beam end and a beam-to-column attaching end component wherein no beam flange material is removed to participate in the creation of a weld trough. Instead, the space for a weld trough is created in the end component, and this trough is prepared with enough all-over length to establish run-on and run-off regions for molten weld material, which regions extend laterally outwardly from the opposite transverse ends of a flange. Full-section welds between a beam's flanges and the attaching end component are achieved without the need to use any run-on and run-off tabs, and also without the need to employ any traditionally-used backing bars.